STRESSFUL LIFE EVENTS, FAMILY FACTORS, AND HEALTH IN YOUNG ADULTHOOD

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Young adulthood has been identified as one of the most stressful stages in the adult life cycle of Western cultures. [1] During this period of life, most young men and women between the ages of twenty and thirty not only establish some independence in relation to their families of origin, but also make important decisions with regard to career choice and intimacy. In addition, young adults are vulnerable to the unpredictable stressors or disruptive events which may occur in all phases of adult life: interpersonal conflict, illness, accident, emotional loss, untimely death, as well as the experience of environmental, economic, political, social, and/or other extrinsic dislocation.

Stress theory proposes a direct link between the kinds of stressful life events involved in major life change and the consequent development of stress-related psychosocial and physical symptoms. One would, therefore, expect a strong correlation between stress and health in a population of young adults. The correlation does, in fact, exist, [2] but it is not absolute.

The purpose of this paper is to present the major findings of a study of young adults which identified variables mediating the impact of stress on health in this age cohort. The main research question was: Why do some highly stressed young adults develop physical and/or psychological symptoms, and others do not? The purpose of the study was to identify variables from family systems theory which mediate the relationship between stress and health, and to propose new directions for social work practice with young adult clients based on the findings of the study.

Overview of the Literature

Adult phases of the human life cycle have received increasing attention in the literature over the past fifteen years. Drawing on frameworks of adulthood conceptualized by Jung, Erikson, and Adolf Meyer, [3] recent studies have examined adult development in terms of salient, phase-specific tasks and transitions. [4] Although young adulthood has not been uniquely the focus of life cycle study, it is frequently described as a "cornerstone" of later adult functioning. [5] Major developmental tasks for this life stage include the conclusion of adolescent separation/individuation, [6] "commitment to intimate interdependence" [7] for the purpose of companionship and reproduction, and occupational choice or "career consolidation". [8]

Young adults are generally fairly physically healthy. As young organisms who have recently achieved biological maturity, they are usually at an optimal state in terms of physical strength, flexibility, endurance, and reproductive capacity. These are some indicators, however, that young adults may be more vulnerable to the impact of live stress than older adults. [9] They may, therefore, be more vulnerable to the negative changes in health status which are associated with life stress. Goldberg and Comstock, [10] in a study of life event frequencies with a sample of 2780 subjects, reported strong associations between age and life events, with young subjects 22.5 times as likely as elderly subjects to report five or more life events. In addition a study of 11,500 people, eighteen and older, living in New Haven, Baltimore and St. Louis, currently being sponsored by the National Institute of Mental Health, has found the highest rate of mental disorders in people in the younger age range (ages 25 to 45). [11] Stress in human systems was first identified in the 1930's by Hans Selye, [12] who described a set of non-specific physiological reactions to noxious environmental agents. Many current definitions [13] continue to identify stress as the response of the organism to external threat. Stress as physiological response, however, represents only one model of stress theory. In addition to this model, two other models have been proposed in the literature. The stimulus-oriented model identifies "stressful life events" [14] as stressors which impact on human organisms, affecting health status and general well-being. A third model, the transaction-oriented model, [15] proposes a circular or cybernetic interaction between stimulus and response, in which the occurrence of stressful events over time is to some extent affected by and interacts with organ response.

The literature has identified many variables which mediate the interaction between stressful stimulus and organ response. These include personality characteristics, constitutional predisposition, health practices, coping techniques, and social support. [16] Social support, defined as interpersonal intimacy, companionship for social interaction and activities, approval, emotional support, and guidance, was the variable most frequently identified in the literature as an effective mediator between stress and health [17].

Additional literature points to family as the core social support system. [18] Constructs from family systems theory were, therefore, reviewed in order to further explore the mediating affects of social support. Bowen family systems theory describes stress in terms of anxiety within the family emotional field, [19] identifying patterns of connectedness and disconnectedness among family members which tend to reduce or increase anxiety. Bowen theory proposes that those who are more distanced or emotionally "cut off" from their families of origin may exhibit greater symptoms of anxiety which in turn may express themselves as illness symptoms. [20] In addition, Bowen theory postulates that

those adults who are able to take responsibility for their own decision-making, life-styles, and independent actions, while remaining emotionally connected to their families of origin, will manage anxiety or stress more effectively.

A specific experience of family stress occurs when the structure of family membership changes through parental death, divorce, separation or desertion. Differing views are expressed in the literature with regard to the impact of the experience of such family structural change in childhood on later adult stress management. Kulka and Weingartern, [21] examining data from two national cross-sectional surveys, found that the coming from a non-intact family of origin had some significance in terms of adult psychological well-being, adjustment, and valuation of spouse and parent roles. However, this significance was not particularly powerful. Munro, [22] in a review of studies of parent-child separation and its clinical impact in adulthood, concluded that parental deprivation may play a part in the development of several psychiatric disorders in adulthood, but he urges more sophisticated research in this area.

The Theoretical Framework

The overarching theoretical framework for the study was stress theory, as the research examined the relationship between stress and selected physical and/or psychological symptoms. Because the population selected for the study was defined by a specific age cohort (age 20 to 30), adult life cycle theory was also utilized. The third theory included in the study was Bowen family systems theory, since the study proposed that three concepts from family systems theory might function as mediator variables between stress and health factors. The study integrated concepts from these three theories in which terminology may differ, but meaning is very similar. For example, stressful life events from stress theory may be expressed as developmental transitions in adult life cycle theory and as disruptions in the family emotional field in Bowen family systems theory.

Methodology

The design of this study of stress in young adulthood was based on a stimulus-oriented model of stress which utilized multiple regression analysis to study the relationship between stressful life events and health symptoms. The dependent variable was stress-related symptoms, and the independent variable was stressful life events. Three additional variables from family systems theory (current quality of connectedness to parents, current level of responsibility for self, structure of

the family in childhood) were hypothesized to mediate the impact of stressful life events on health symptoms in young adulthood, Control variables included in the study were age, gender, parents' socio-economic status, and race.

A study sample of 600 was randomly selected from 23,900 young adults members of a large health maintenance organization (Group Health Association) in the Greater Washington, D.C., area. The birthdays of members selected for study fell between July 1954 and July 1964, and they were between twenty and thirty years old at the time of the study. A composite questionnaire was mailed to this sample in July 1984. The questionnaire included measure of the dependent variable, health status, the independent variable, young adult stress, three hypothesized mediator variables from family systems theory, and demographic data.

The dependent variable, health status, was measured through use of a "health status check list" developed and content validated (with a 79% rate of agreement) by physicians from the Group Health Association. Twenty-four stress-related physical and psychological symptoms were selected for inclusion in the check list.

The independent variable, young adult stress, was measured by a version of the Life Experience Survey (LES) [2 3] which was adapted for use with a young adult population. [2 4] Test re-test reliability studies of LES have been conducted by Sarason, et al., with a reliability coefficient for negative change scores of .88 ($p<.001$). Because results suggest that LES is a reliable instrument especially when negative change (undesirable) scores are considered, only negative (undesirable) responses were used in developing a stress scale for this study. In addition to a total stress scale, two smaller stress scales ("relationship-related stress" and "role stress") were developed, based on selected items from LES.

Three concepts from family systems theory were selcted as variables hypothesized to be mediators between stress and health: "current connectedness to parents", "responsibility for self", and "structure of the family of origin". A "current connectedness to parents" scale was developed, based on respondents' perceptions of their present relationship with parenting figures. Four categories of connectedness were: 1) friendly, autonomous; b) very close or enmeshed; 3) deceased parent(s) or distant, unfriendly, or cut-off from living parent(s); and 4) mixed responses. These categories were dummy coded for the purposes of multiple regression analysis.

Two "responsibility for self" scales were developed from questions relating to questions about 1) health, life style, and substance abuse; and 2) responsibility for self in areas of daily living. Both scales had reliability coefficients of .55, using

Cronbach Alpha, and therefore findings based on use of these scales were interpreted cautiously. Structure of the family origin was coded in two categories: 1) intact under the age of 18; and 2) other.

Data Analysis

Response Rate. Two hundred fifty four subjects responded to the questionnaire within a two month period. Based on GHA estimates of a twenty percent error rate in member addresses, this number of responses represents approximately a 50% rate of return. Of the total number of responses returned, 216 were usable. The study was based on these 216 responses.

The data analysis took place in three stages. The first stage included statistics describing the study population through frequencies, percentages, and measures of central tendency. The second stage focused on bivariate analysis of relationships between independent, mediator, control, and dependent variables. The third stage of the analysis tested the five research hypotheses of the study through use of hierarchical multiple regression analysis, in order to identify and analyze the systematic relationships between the major variables of the study. In addition the testing the hypotheses, two further procedures were undertaken for exploratory purposes. These included testing for interaction effects between the independent variable, stress, and a powerful control variable, gender, and testing for gender differences in stress, which was subdivided into "relationship-related" stress and "role" stress.

Major Study Findings

Characteristics of the Study Sample. The sample of 216 members of the Group Health ASsociation (GHA) were 67% females and 33% males, between the ages of 20 and 30, with a mean age of 25.1. Sixty percent of the respondents were White and 40% were Non-White. Seventy six percent had attended some college courses. Forty one percent came from families in which the father was a professional or technical worker. Seventy six percent of respondents were employed, and, of these, 32% were professional or technical workers and 33% were clerical workers. Fifty three percent had not yet been married, and 24% were still living in the family they had grown up in. The study sample appears to be representative of GHA's total young adult membership with regard to age and sex, but appears to be skewed in the direction of higher educational levels and higher family socio-economic status. The college educated profile of the sample may be characteristic of the kind of self-selecting individual who tends to complete mail questionnaire.

Young adult stress. The most frequently occurring stressful life experience reported by the sample was "making major decisions about life goals", followed by changing work situation, changing residence, changing social activities, changing recreational activities, changing financial status, changes in family closeness, and concerns about the world situation. If stress can be most broadly defined as "change", then the responses of this sample surely support assumptions in the literature that young adulthood is a stressful period of life.

This observation is confirmed by the comments which respondents made in the open-ended space at the end of the questionnaire. Major stresses mentioned included the pressure, whether from peers, parents, or "society", to meet high expectations in their work and /or private life: "life is too busy, not enough hours in the day," "money problems," "so much emphasis on success, production, fitness, super Moms, super Dads, money," "competitive feelings," loneliness, "hard to make friendships and develop ties," "so many decisions and so little information to make them with," living with parents "when I should be on my own," feeling "at the age of 28-30 you should working in a great job, earning lots of money, own a home, expensive car, sexually active, and a minimum of problems -- if there are any deviations, you feel like a failure." Single respondents raising children alone seemed to feel these pressures most intensely.

Others mentioned that even positive events can be stressful, such as adjusting to getting married, graduating from college, and becoming independent: "I think part of it is finally growing up, losing some of your idealistic thoughts and accepting everyday life and the real world. It's very stressful knowing the world and the people in it are not perfect, and that there are some things you can never change, regardless of how good a person you are."

Stress and symptoms. The most frequently reported stress-related symptoms for this sample were headaches, weight gain or loss, excessive fatigue, sleep difficulties, back pain, nervousness, excessive worry, depression, and stomach cramps. In addition, 35% reported several or many contacts with Group Health during the past year; 29% are currently taking medication; 17% have had accidents resulting in physical injury during the past year; and 18% have been hospitalized during the past year; 14% missed one or more days of work or schooling per month because of illness and/or accidents. In response to an open-ended question, subjects also linked temporal mandibular joint syndrome (TMJ), low blood sugar, chronic colds and flus, ear and throat infections, low energy, tension, and premature birth to stress in their lives.

Stressful life events and self-reported symptoms were significantly and positively correlated both when symptoms were considered as a whole, and when they were divided into physical and psychological symptoms (see Table 1).

The relationship between these two variables continued to be significant when four control variables (age, sex, race, and parents' socio-economic status) were entered into a multiple regression equation. The relationship was also significant when stress was divided into the two sub-categories of relationship-related stress and role stress. When additional mediator variables (structure of family origin, connectedness to parents, responsibility for self, and interaction effects) were introduced into the regression, almost 22% of the variance in the relationship between stress and symptoms was accounted for (see Table 2).

Structure of Family of Origin. Sixty nine percent of the sample had lived in an intact family up to the age of eighteen. Seven percent of the sample had lived for some of their childhood in step-families, and 22% had lived for some of their childhood in single parent families. Because of the small number of respondents who had lived in step-families, it was not possible to differentiate the stress/health impact on young adults who had grown up in a step-family as opposed to those who had grown up in a single parent family. When respondents were re-grouped into intact and on-tact families of origin, this variable was significantly inversely correlated with stress. Those who had grown up in intact families reported less current stress than those who had grown up in other family structures. This finding confirms observations in the literature [2 5] that the experience of family disruption in childhood does impact on the stressful quality of later adult life.

The structure of family of origin did not correlate significantly with self-reported symptoms and did not contribute significantly to the variance of those symptoms when introduced into a multiple regression equation with stress and the four control variables. Based on these findings, one can therefore conclude that those who have grown up in a non-intact family do experience more stress in relationships as young adults, but that they manage this stress so that it does not lead to the development of physical or psychosocial symptoms. This finding is confirmed by several long-term studies of adults who have grown up in single parent families or step-families.

Current Connectedness to Parents. Thirty seven percent of respondents reported that they had a "friendly"or autonomous relationship with their parents, 14% reported predominantly "very close", poorly differentiated or "enmeshed" relationship with parents, and 9% reported "distant," "unfriendly", "no contact" or "cut off" relationships with parents. Friendly relationships

were significantly inversely correlated with both self-reported health symptoms and stress. This finding confirms the Bowen family systems theory postulation that a connected but autonomous or differentiated relationship with family is indicative of a higher level of functioning, including less stress-related illness.

Being cut off from parents was significantly positively correlated with health symptoms, but not with stress or relationship-related stress in bivariate analysis. When entered into a multiple regression equation with stress, four control variables, and three other measures of connectedness to parents, "cut off" contributes more to the R Square Change than any other variable. This means that a distant, unfriendly or cut-off relationship with parents plays an important part in the association between stress and symptoms in young adulthood, with cut-off individuals experiencing more stress-related symptoms than others. This finding confirms a postulation of Bowen family systems theory that "cut-off" relationships can negatively effect functioning including health status. If "cut-off" relationships are a measure of lack of social support, this finding also confirms the power of social support as a mediator between stress and health status.

"Very close" or enmeshed relationships with parents were not significantly correlated with either stress or self-reported health symptoms. According to Bowen family systems theory, "enmeshment" is closely associated with "cut off", as both concepts express aspects of poor differentiation of self, one through over-involvement and the other through distancing. Theoretically "enmeshment" should have been as powerfully correlated with stress and health status as "cut off". It is possible that "enmeshment" was not as clearly defined in the questionnaire as "cut off", and that its meaning was somewhat blurred in the minds of the respondents with "friendly" relationships with parents. It is also possible that "enmeshment" with parents during young adulthood is more societally tolerated and developmentally appropriate than"cut off", and that such closeness may have some of the stress-buffering functions that exist in friendly, autonomous relationships with parents.

Responsibility for Self. "Responsibility for self" was not significantly correlated with health symptoms or stress in this study. In multiple regression equations, this variable (represented by a "substance abuse" scale and a "daily living" scale) did not contribute significantly to R Square Change in the variance of self-reported symptoms, nor was it significant when interaction effects were included. This aspect of Bowen family systems theory was therefore not confirmed.

Gender. was a significantly correlated with health

symptoms, as females reported more symptoms than males. Gender was not significantly correlated with stress or relationship-related stress. However, when it was entered into a multiple regression equation with stress, it became a significant control variable (see Table 3). Gender retained its significance when each additional mediator variable was entered into the regression analysis, and made a significant contribution to R Square Change in its interaction with stress (see Table 2). This interaction effect indicates that, contrary to the outcome of the simple correlation, as stress increases, males report more symptoms than females, when family structure, connectedness to parents, and responsibility for self are included in the equation.

Using correlations alone, it would appear that this study refutes the findings of the literature [26] that gender is significantly associated with relationship-related stress. The only variables which were found to significantly correlated with relationship-related stress were health, race, family structure, and "friendly" connectedness to parents. In multiple regression analysis and interaction effects, however, gender emerged as a powerful control variable with significant participation in the whole equation. Findings in the literature with regard to gender and stress are based on studies of broader adult populations. This research, therefore, identifies the young adult age cohort as different from broader populations in its responses to stress, with young adult males reporting more symptoms than females as the stress in their lives increases.

Summary

The findings from this study indicate that the association between stress and self-reported symptoms is strong and consistent, corroborating this observation in the extensive literature on stress and health.

The "current quality of connectedness" to parents emerge as the most significant mediator between stress and self-reported health symptoms in the study. Those with friendly, autonomous relationships with parents report fewer stress-related health symptoms, given equal levels of undesirable stress, than those who are cut off from parents. The relationship between "cut off" and symptoms is probably the most significant finding in the study and deserves to the focus of further research. This finding not only confirms the importance of social support as a mediator between stress and symptoms in young adulthood, but it identifies the quality of relationship with parents as a key element of social support, thus validating an important concept form Bowen family systems theory.

The structure of the family in which respondents grew up has a significant impact on young adult experience of stress; those who grew up in intact families reported less current life stress and relationship-related stress than those who grew up in non-intact families. However, this variable is not a significant mediator between stress and self-reported health symptoms, thus indicating that young adults who have frown up in non-intact families have been able to manage their stress so that it does not lead to the development of symptoms.

Implications for Social Work Practice

The findings of this research study have direct implications for social work practitioners who work with young adult members of health maintenance organizations. The study identifies critical areas of stress for young adults and clearly associates these areas of stress with both physical and psychosocial symptoms.

It also identifies important aspects of social support as mediators between stress and symptomatology in young adulthood. A common assumption in the social work profession is that young adults are primarily associated with peers as intimates and that the relationship with family of origin may no longer be significant. The findings of this study indicate that maintaining a friendly, connected, but autonomous relationship with parents may be conducive to better stress management and health, whereas "cut off" relationships with parents have poor implications for stress management and health. These findings can contribute to social work understanding of the need for young adults to strive toward connected, but autonomous relationships with their parents in order to improve overall levels of functioning. The importance of peer relationships was not tested in this study, but a comparison of peer and parental supports in mediating stress may well be a valuable area for future research.

In addition, the findings of this study with regard to the impact of changes in childhood family structure on young adult experiences of stress and health can contribute to social work understanding of the increasingly common phenomena of family disruption, and perhaps contribute to more effective counseling of families considering parental separation.

This study contributes to social work theory development through effectively linking stress theory, developmental theory, and family systems theory. It provides a data base for social work practice with young adult clients, as well as for educational information-sharing with non-clinical young adults. It also contributes to the illness prevention model of health maintenance organizations through identifying specific aspects of family relationships which are conducive to improved stress management and good health.

Notes

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TABLE 1

PEARSON R CORRELATIONS FOR UNDESIRABLE LIFE STRESS

Variable	Pearson R	Probability
Physical symptoms	.220	.001
Psychological symptoms	.189	.003
Total symptoms	.229	.000

TABLE 2

MULTIPLE REGRESSION ANALYSIS OF SYMPTOMS, STRESS, AND FAMILY FACTORS, USING INTERACTION EFFECTS

Variable	Multiple R	R Square	Rsq Change	F Ratio	Beta Coefficient
Age	.045	.002	.002	.144	-.028
Sex	.141	.020	.018	9.863**	-.395
Race	.164	.027	.007	3.134	.128
ParSES	.182	.033	.006	3.764	.134
Stress	.298	.089	.056	.898	-.182
Family Structure	.299	.089	.000	2.046	.099
Friendly	.338	.114	.025	3.912*	-.157
Cut-Off	.439	.192	.078	14.301**	.258
Enmeshed	.445	.198	.006	2.177	-.107
SubAbus	.445	.198	.000	.025	-.010
Daily Liv	.445	.198	.000	.000	-.000
Sex/Stress	.466	.217	.018	4.761*	.467

*$p < .05$ ** $p < .01$

TABLE 3

MULTIPLE REGRESSION ANALYSIS OF SELF-REPORTED SYMPTOMS AND STRESS INCLUDING CONTROL VARIABLES

Variable	Multiple R	R Square	Rsq Change	F Ratio	Beta Coefficient
Age	.045	.002	.002	.194	-.029
Sex	.141	.020	.018	4.102*	-.134
Race	.164	.027	.007	1.312	.082
ParSES	.182	.033	.006	1.910	.099
Stress	.298	.089	.056	12.856**	.240

*$p < .05$ ** $p < .01$